

WHAT IS CLAIMED IS:

1. A method for managing query execution in a data processing system, comprising:
 - providing at least one query execution schedule configured to schedule specific queries against a database in the data processing system;
 - receiving a query against the database; and
 - managing execution of the received query on the basis of the at least one query execution schedule.
2. The method of claim 1, wherein managing the execution of the received query comprises:
 - determining, whether the received query is a specific query; and
 - if so, scheduling execution of the received query using the query execution schedule.
3. The method of claim 1, wherein the at least one query execution schedule defines query eligibility criteria identifying the specific queries and a timeframe available for executing the specific queries.
4. The method of claim 3, wherein the query eligibility criteria comprise at least one of:
 - an estimated amount of resources required for execution of the specific queries;
 - an availability of data sources accessed by the specific queries;
 - a user submitting the specific queries; and
 - an application submitting the specific queries.
5. The method of claim 1, wherein the at least one query execution schedule is statically defined by a human operator.

6. The method of claim 1, wherein the at least one query execution schedule is dynamically defined by the data processing system on the basis of monitored system parameters.

7. A method for scheduling execution of a query against a database in a data processing system, comprising:

- providing a plurality of query execution schedules, each query execution schedule defining query eligibility criteria identifying specific queries and a timeframe available for executing the specific queries;

- receiving a query against the database;

- determining, for the received query, a suitable query execution schedule on the basis of the query eligibility criteria of the plurality of query execution schedules; and

- scheduling execution of the received query against the database on the basis of the timeframe defined by the suitable query execution schedule.

8. The method of claim 7, wherein a plurality of suitable query execution schedules is determined and wherein the scheduling comprises:

- determining an intersection of the timeframes of the plurality of suitable query execution schedules; and

- scheduling execution of the received query against the database on the basis of the determined intersection.

9. The method of claim 7, wherein a plurality of suitable query execution schedules is determined and wherein the scheduling comprises:

- determining an intersection of the timeframes of the plurality of suitable query execution schedules;

- determining whether the intersection is empty or not; and

- if the intersection is not empty, scheduling execution of the received query against the database on the basis of the determined intersection; and

if the intersection is empty, notifying a user.

10. The method of claim 7, wherein the query eligibility criteria comprise at least one of:

- an estimated amount of resources required for execution of the specific queries;
- an availability of data sources accessed by the specific queries;
- a user submitting the specific queries; and
- an application submitting the specific queries.

11. The method of claim 7, wherein the plurality of query execution schedules is statically defined by a human operator.

12. The method of claim 7, wherein at least one of the plurality of query execution schedules is dynamically defined by the data processing system on the basis of monitored system parameters.

13. The method of claim 12, wherein the monitored system parameters comprise at least one of:

- a peak query workload time period;
- a light query workload time period; and
- a time pattern indicating availability of the database.

14. The method of claim 13, wherein the database includes distributed data sources and wherein a separate time pattern is provided for each distributed data source, the separate time pattern indicating availability of a corresponding distributed data source.

15. A method of providing a query execution schedule for scheduling execution of specific queries against a database in a data processing system, comprising:

- defining query eligibility criteria identifying the specific queries to be scheduled by the query execution schedule;

defining a timeframe available for executing the specific queries; and
associating the query eligibility criteria and the timeframe with the query execution schedule.

16. The method of claim 15, wherein the query eligibility criteria comprise at least one of:

- an estimated amount of resources required for execution of the specific queries;
- an availability of data sources accessed by the specific queries;
- a user submitting the specific queries; and
- an application submitting the specific queries.

17. The method of claim 15, further comprising:

- monitoring system parameters of the data processing system; and

- wherein the defining of the query eligibility criteria and the timeframe comprises:

- dynamically defining the query eligibility criteria and the timeframe on the basis of the monitored system parameters.

18. The method of claim 17, wherein the monitored system parameters comprise at least one of:

- a peak query workload time period;
- a light query workload time period; and
- a time pattern indicating availability of the database.

19. The method of claim 18, wherein the database includes distributed data sources and wherein a separate time pattern is provided for each distributed data source, the separate time pattern indicating availability of a corresponding distributed data source.

20. A computer readable medium containing a program which, when executed, performs a process for managing query execution in a data processing system, the process comprising:

receiving a query against a database in the data processing system;
retrieving at least one query execution schedule configured to schedule specific queries against the database; and
managing execution of the received query on the basis of the at least one query execution schedule.

21. The computer readable medium of claim 20, wherein managing the execution of the received query comprises:

determining, whether the received query is a specific query; and
if so, scheduling execution of the received query using the query execution schedule.

22. The computer readable medium of claim 20, wherein the at least one query execution schedule defines query eligibility criteria identifying the specific queries and a timeframe available for executing the specific queries.

23. The computer readable medium of claim 22, wherein the query eligibility criteria comprise at least one of:

an estimated amount of resources required for execution of the specific queries;
an availability of data sources accessed by the specific queries;
a user submitting the specific queries; and
an application submitting the specific queries.

24. The computer readable medium of claim 20, wherein the at least one query execution schedule is statically defined by a human operator.

25. The computer readable medium of claim 20, wherein the at least one query execution schedule is dynamically defined by the data processing system on the basis of monitored system parameters.

26. A computer readable medium containing a program which, when executed, performs a process for scheduling execution of a query against a database in a data processing system, the process comprising:

- receiving a query against the database;
- retrieving a plurality of query execution schedules, each query execution schedule defining query eligibility criteria identifying specific queries and a timeframe available for executing the specific queries;
- determining, for the received query, a suitable query execution schedule on the basis of the query eligibility criteria of the plurality of query execution schedules; and
- scheduling execution of the received query against the database on the basis of the timeframe defined by the suitable query execution schedule.

27. The computer readable medium of claim 26, wherein a plurality of suitable query execution schedules is determined and wherein the scheduling comprises:

- determining an intersection of the timeframes of the plurality of suitable query execution schedules; and
- scheduling execution of the received query against the database on the basis of the determined intersection.

28. The computer readable medium of claim 26, wherein a plurality of suitable query execution schedules is determined and wherein the scheduling comprises:

- determining an intersection of the timeframes of the plurality of suitable query execution schedules;
- determining whether the intersection is empty or not; and
- if the intersection is not empty, scheduling execution of the received query against the database on the basis of the determined intersection; and
- if the intersection is empty, notifying a user.

29. The computer readable medium of claim 26, wherein the query eligibility criteria comprise at least one of:

- an estimated amount of resources required for execution of the specific queries;
- an availability of data sources accessed by the specific queries;
- a user submitting the specific queries; and
- an application submitting the specific queries.

30. The computer readable medium of claim 26, wherein the plurality of query execution schedules is statically defined by a human operator.

31. The computer readable medium of claim 26, wherein at least one of the plurality of query execution schedules is dynamically defined by the data processing system on the basis of monitored system parameters.

32. The computer readable medium of claim 31, wherein the monitored system parameters comprise at least one of:

- a peak query workload time period;
- a light query workload time period; and
- a time pattern indicating availability of the database.

33. The computer readable medium of claim 32, wherein the database includes distributed data sources and wherein a separate time pattern is generated for each distributed data source, the separate time pattern indicating availability of a corresponding distributed data source.

34. A computer readable medium containing a program which, when executed, performs a process of providing a query execution schedule for scheduling execution of specific queries against a database in a data processing system, the process comprising:

- defining query eligibility criteria identifying the specific queries to be scheduled by the query execution schedule;
- defining a timeframe available for executing the specific queries; and

associating the query eligibility criteria and the timeframe with the query execution schedule.

35. The computer readable medium of claim 34, wherein the query eligibility criteria comprise at least one of:

- an estimated amount of resources required for execution of the specific queries;
- an availability of data sources accessed by the specific queries;
- a user submitting the specific queries; and
- an application submitting the specific queries.

36. The computer readable medium of claim 34, further comprising:
monitoring system parameters of the data processing system; and
wherein the defining of the query eligibility criteria and the timeframe comprises:
dynamically defining the query eligibility criteria and the timeframe on the basis of the monitored system parameters.

37. The computer readable medium of claim 36, wherein the monitored system parameters comprise at least one of:

- a peak query workload time period;
- a light query workload time period; and
- a time pattern indicating availability of the database.

38. The computer readable medium of claim 37, wherein the database includes distributed data sources and wherein a separate time pattern is provided for each distributed data source, the separate time pattern indicating availability of a corresponding distributed data source.

39. A data processing system comprising:
a database; and

a query manager residing in memory for managing query execution in the data processing system, the query manager being configured for:

- receiving a query against the database;
- retrieving at least one query execution schedule configured to schedule specific queries against the database; and
- managing execution of the received query on the basis of the at least one query execution schedule.

40. A data processing system comprising:

a database; and

a query manager residing in memory for scheduling execution of a query against the database, the query manager being configured for:

- receiving a query against the database;
- retrieving a plurality of query execution schedules, each query execution schedule defining query eligibility criteria identifying specific queries and a timeframe available for executing the specific queries;
- determining, for the received query, a suitable query execution schedule on the basis of the query eligibility criteria of the plurality of query execution schedules; and
- scheduling execution of the received query against the database on the basis of the timeframe defined by the suitable query execution schedule.

41. A data processing system comprising:

a database; and

a query execution schedule manager residing in memory for providing a query execution schedule for scheduling execution of specific queries against the database, the query execution schedule manager being configured for:

- defining query eligibility criteria identifying the specific queries to be scheduled by the query execution schedule;
- defining a timeframe available for executing the specific queries; and

associating the query eligibility criteria and the timeframe with the query execution schedule.

42. A data structure for scheduling execution of specific queries against a database in a data processing system, the data structure residing in memory and comprising:
- at least one query eligibility criterion field for identifying the specific queries to be scheduled; and
 - a timeframe field for identifying a period of time available for executing the specific queries.